UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Ecological Site Description

Site name: LIMESTONE COASTAL HILL
Site number: R-271ZY026PR
Major Land Resource Area: 271 Semiarid Mountains and Valleys
Interstate correlation: NONE

Physiographic features:
This site occurs on the steep mountain summits, side slopes and foot slopes in the semiarid region. It is formed in the residuum and colluvium that weathered from volcanic and limestone bedrock. Elevation ranges from 30 to 1000 feet.

Climatic features:
Frost-free period: 365 DAYS
Freeze-free period: 365 DAYS
Mean annual precipitation: 33 inches
Mean annual air temperature: 79ºF
Mean annual soil temperature:
Monthly moisture and temperature distribution:

	Mean Precipitation (inches)	**Percent Precipitation (%)**	**Mean Temperature (ºF)**
January	.78	2.36	76
February	.72	2.18	76
March	.86	2.63	77
April	1.92	5.82	78
May	2.92	8.85	80
June	3.13	9.48	81
July	2.91	8.82	82
August	4.45	13.48	82
September	5.26	15.94	81
October	5.63	17.26	81
November	3.18	9.64	79
December	1.20	3.64	77
Mean annual	**33**		**79ºF**

Other climatic features: A rainy season prevails from July to November and a pronounced dry season occurs during the remainder of the year. Hurricanes are most

likely to occur August through November, and are characterized by strong winds and torrential rains.

Associated water features: Small intermittent streams.

Elevation Aspect: 150 to 1500 ft.

Percent Slope: 2 to 60

Soils: Soils of this site are shallow to moderately deep to soft or hard limestone, well drained, moderately fine texture, sloping to very steep slopes on side slopes, foot slopes, rounded hills and hilltops in the semiarid limestone uplands.

Major Soil Taxonomic Units correlated to this site include:

Aguilita, AcD, AcE, AhF, AgC2, AgD, AgE, AgF
Duey (tentative Series)
San Germán, SgD, SgF, SmE
Seboruco-Limestone Outcrop Complex, (tentative Series)
Tuque, TuF

Plant communities:

This site is the driest type of grassland described and the majority of the vegetation is xerophytic. The site exists on the rolling hills of the dry southwestern uplands. Grasses constitute approximately 70% of the plant composition, forbs 5%, shrubs 24 and trees 1%. The site as described is extremely arid therefore no introduced species are recommended for planting. There are however on the lower slopes areas with Buffel grass.

Major plant species composition:

Predominant plant community is yerba de alambre (*Uniola virgata*)-Guinea grass (*Urochloa maxima*)-Hurricane grass (*Bothriochloa pertusa*), with a relatively high abundance of *Leucaena leucocephala*, and brushy/thorny species.

GRASSES AND GRASSLIKES

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For group
ARAD	Six weeks three awn	1			
CHIN4	Mexican bluegrass	1			
INVI2	plumach	1			
PAPA7		1			

PECI	Buffel grass	1			
SPPY2	Pyramid grass	1			

FORBS

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For group
AGMI4	Agave	2			
CODO	Cock's spur	2			
COHI3	Jack switch	2			
CRRI2	Adormidera	2			
DIMA7	Mato de costa	2			
OPBO	Dillards cactus	2			
OPRE2	Suckers	2			
STHA	Stylo	2			
TUDI	Damiana	2			
ZAMO	Yellow prickle	2			

Shrubs and Trees

Scientific Symbol	Common Name	Group	Pounds per Acre	Percent by Weight	Percent Allowed For group
CAPR	Giant milkweed	3			
CERO2	Dildo	3			
CROTO	Croton	3			
JAAR	Barbasco	3			
JAUM	Chirriador	3			
LAIN2	Wild sage	3			
LELE10	Tan tan	3			
MEIN7	Turk's cap	3			
PIAL3	Corcho	3			
TAHE	White cedar	4			

Ground Cover and Structure

	Height Above the Ground											
	Not applicable		6 to 12 inches		12 to 24 inches		24 to 60 inches		60 to 80 inches		180 to 240 inches	
	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover	% Ground cover	% Canopy cover
Trees												
Shrubs							5	15				
Grasses and grasslikes							10	50				
Forbs					1	15						
Cryptogams												
Coarse fragments												
Bare ground												
Litter												

Transition Pathways: With continuous heavy grazing, palatable perennial grasses, forbs and shrubs will decrease. Native species will be replaced by introduced grasses and woody species that leave the ground bare of cover. Fires expands with devastating results. With continuous overgrazing and fire, brushy species such as Crotons will dominate. Bare ground cover will decrease and will promote erosion, resulting in gully formation and the disappearance of desirable habitat. Grazing should not be allowed in this site due to the fragile nature and wildlife habitat value.

Total annual production: 3,750lb/ac normal year

Plant Growth Curves:

Growth curve number: PR001
Growth curve name: PR PLANT GROWTH CURVE
Growth curve description: Native and naturalized grasslands.

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
6	5	4	7	12	10	9	10	11	10	9	7

Animal Community:

This site is important several wildlife species. Major species using the site include:

Adelaide's warbler
Barn swallow
Buteo
Caribbean elaenia

Cattle egret
Helmeted guinea fowl
Iguana iguana
Lesser antillian pewee
Lizards
Mangose
Mangrove cuckoo
Mourning dove
Northen mockingbird
Other rodents
Ovenbird
Pearly eyed thrasher
Peregrine Falco
Prairie warbler
Puerto Rican flycatcher
Puerto Rican nigthjar
Sparrow hawk
Turkey vulture
Yellow faced grassquit

Associated sites: DRY HILLY

Similar sites:
Plant communities, production, and vigor of this site is similar enough to other sites in the region to cause a problem or concern mainly during drought, fire and overgrazing conditions.

Site documentation:

Author: M. Montes, E. Más
Revised: 05/2002, E. Más, J. Lugo, S. Ríos

Supporting data for site development: Supporting data include clipping studies, and historical writing of the area. More documentation and study are needed to fully understand this site and the transitions that occur.

Sampling techniques:

SCS-Range 417

Type locality: Hills of Guayanilla and El Faro, Cabo Rojo, PR.

Field Offices: Juana Díaz, Ponce, San Germán

References:

USDA, NRCS. 1997. National Range and Pasture Handbook.

USDA, SCS. Lajas Soil Survey, Ponce Soil Survey, Humacao Soil Survey

Site Approval:
This site has been reviewed and approved for use:

USDA NRCS Resource Conservationist Date